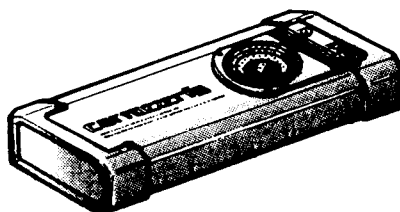


Service Manual



ORDER NO.
TRT1053

SURFACE-MOUNT TUNE-UP WOOFER SYSTEM

TS-LX100

EW

SPECIFICATIONS

•Speaker specifications

Size ϕ 180mm (7"Dia.)
Injection-molded polypropylene cone
High compliance, rolled edge
Heat-resistant voice coil
Strontium magnet : 440g (15.5oz)

•Amplifier

Max. Power output 80W (60Hz, 30% THD)
INPUT LEVEL (at Gain Max.)
(RCA) 150mV+150mV / 20k Ω
(Speaker line) 1.5V+1.5V / 5k Ω
Power source DC14.4V (10.8 - 15.6V allowable)
Max. current consumption 6A
Grounding Negative ground

•Speaker system Bass-reflex type

•Sensitivity 94dB (1m / 10W, 60Hz)(max. 103dB)

•Size 740mm (29-1/8")W \times
320mm (12-5/8")H \times 141mm (5-1/2")D

•Cabinet material Medium density fiber Particle board

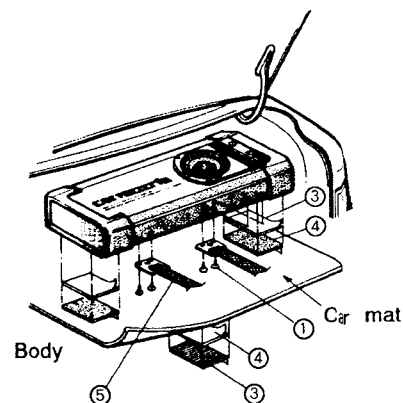
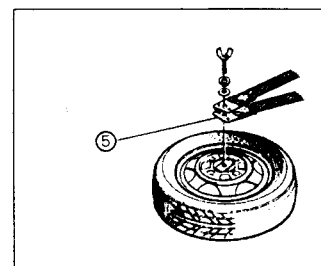
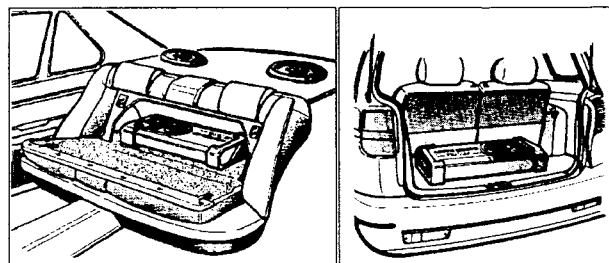
•Weight (including accessory parts) 8.40kg (18lb 8oz)

•Gross weight (including packaging) 9.80kg (21lb 10oz)

Note :

Specifications and the design are subject to possible modification without notice due to improvements.

EXAMPLE OF INSTALLATION



PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan

PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.

PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway Markham, Ontario L3R 0P2 Canada

PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium

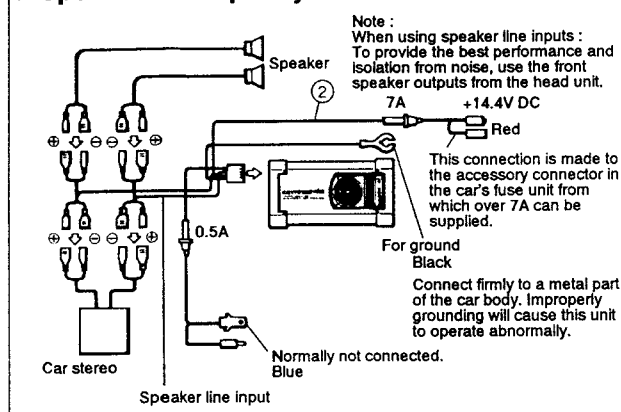
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-911 1

© PIONEER ELECTRONIC CORPORATION 1993

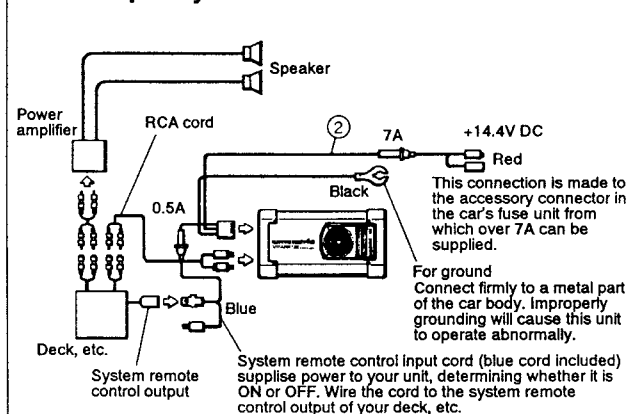
JUNE 1993 Printed in Japan

WIRING EXAMPLE

1. Speaker line input system



2. RCA input system



EXPLODED VIEW AND PARTS LIST

NOTES:

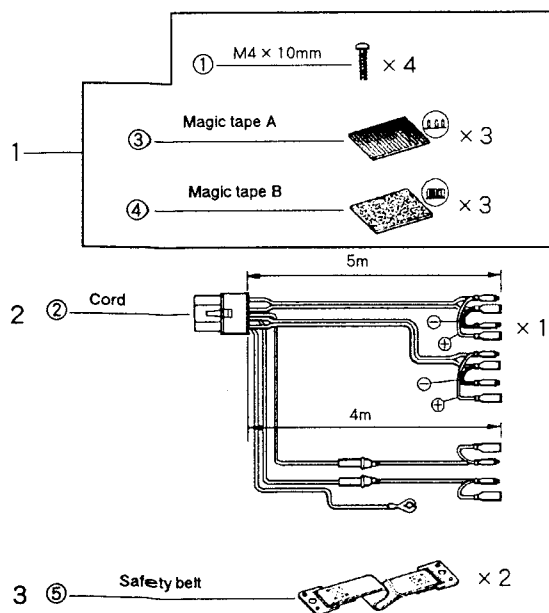
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

PACKING

Mark	No.	Description	Part No.	Remark
	1	Installation kit (Magic tape A, B, Screw)	TEA1386	× 1
	2	Cord	TDC1758	× 1
	3	Belt	TNA1203	× 2
		Operating instructions	TRA1329	× 1
		Packing case	THF1938	× 1
For L,R side		Styrofoam protector	TEC1600	1pair
section		Sheet	TEC1605	× 2
For center		Styrofoam protector	TEC1627	1pair
section		Sheet	TEC1630	× 1

PARTS LIST OF EXPLODED VIEW

Mark	No.	Description	Part No.	Remark
⊙	1	CONTROL UNIT	TWG1005	× 1
⊙	2	TERMINAL UNIT	TWS1022	× 1
⊙	3	POWER AMP UNIT	TWH1011	× 1
	4	Speaker	16-1021BZ	× 1
	5	Panel assembly	TXK1289	× 1
NSP	6	Mesh	TLL1299	× 1
NSP	7	Front panel assembly	TXK1290	× 1
	8	Cabinet assembly	TXC1103	× 1
	9	Bracket	TNA1276	× 1
	10	Heat sink	TNA1277	× 1
	11	VR knob	TAA1005	× 3
	12	Screw	TBA1063	× 6
	13	Switch knob	TAA1009	× 1
	14	Cord	TDC1729	× 1
	15	Packing	TED1102	× 1
	16	Packing	TED1103	× 2
	17	Cushion	TED1104	× 1
	18	Insulator	TNM1005	× 1
	19	RCA cap	TEB1173	× 2
	20	Screw	BBZ30P060FMC	× 3
	21	Screw	PBB30P140FMC	× 2
	22	Screw	PNC50P160FMC	× 4
	23	Screw	BNC30P200FMC	× 2
	24	Screw	BNC30P120FMC	× 2
	25	Screw	BSZ30P060FMC	× 8



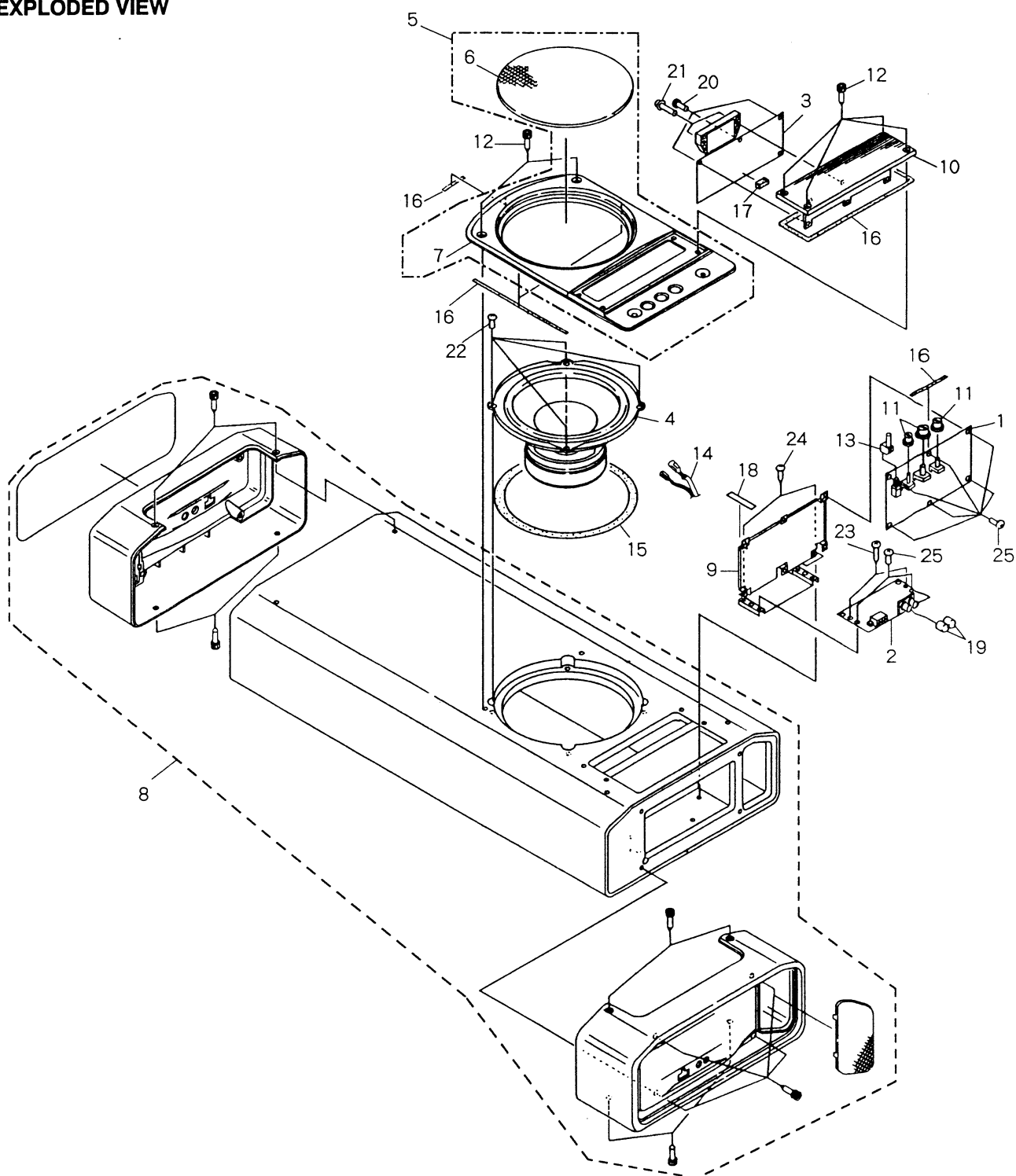
EXPLODED VIEW

A

B

C

D



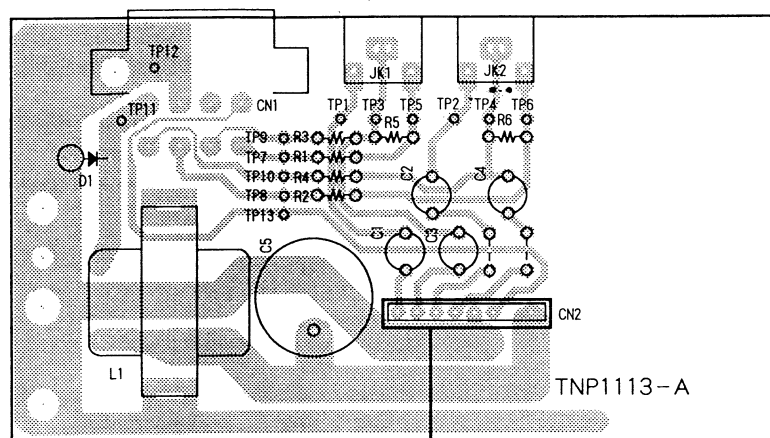
A



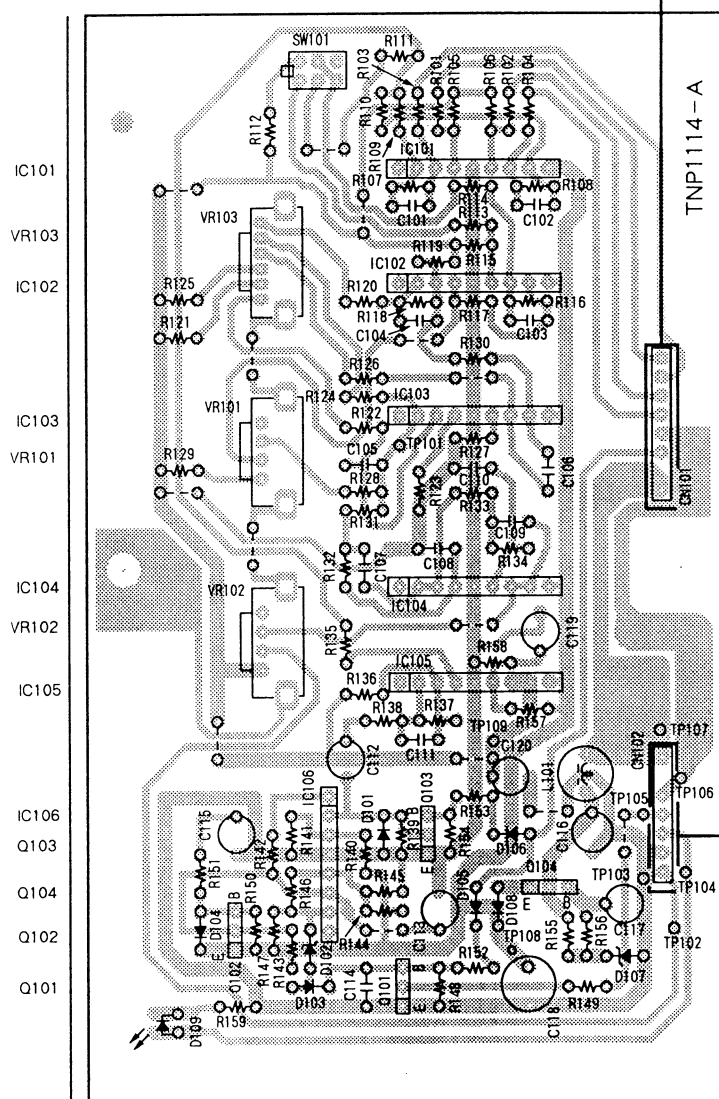
PCB CONNECTION DIAGRAMS

● This P. C. B. connection diagram is viewed from the foil side.

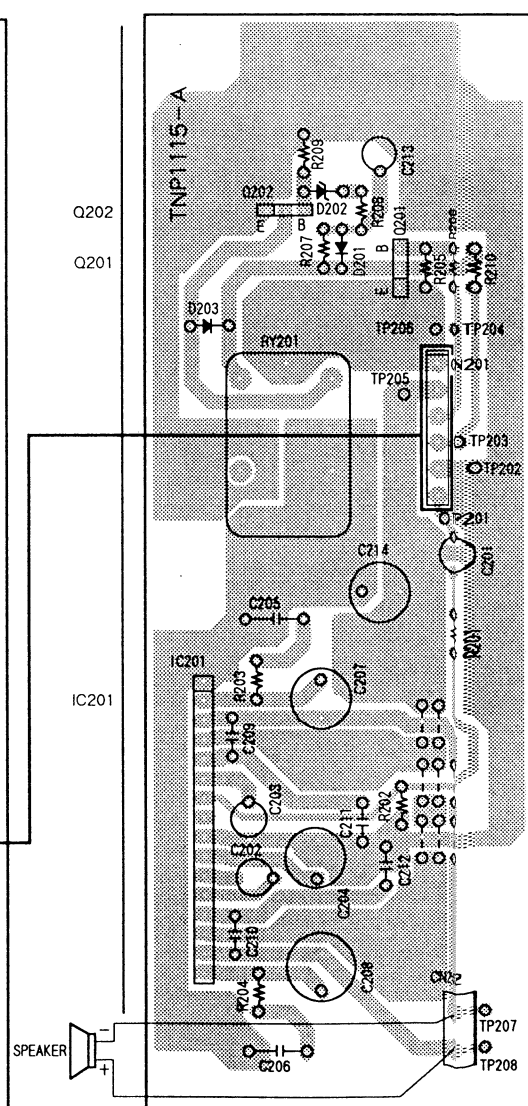
TERMINAL UNIT (TWS1022)



CONTROL UNIT (TWG1005)



POWER AMP UNIT (TWH1011)



SPEAKER

PCB PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits(any digit apart from 0), such as 560 ohm and 47k ohm(tolerance is shown by J=5%, and K=10%).

560 Ω \rightarrow $56 \times 10^1 \rightarrow 561$ RD1/8PM $\boxed{5}\boxed{6}\boxed{1}$ J

47k Ω \rightarrow $47 \times 10^3 \rightarrow 473$ RD1/4PS $\boxed{4}\boxed{7}\boxed{3}$ J

0.5 Ω \rightarrow 0R5 RN2H $\boxed{0}\boxed{R}\boxed{5}$ K

1 Ω \rightarrow 010 RS1P $\boxed{0}\boxed{1}\boxed{0}$ K

Ex.2 When there are 3 effective digits(such as in high precision metal film resistors).

5.62k Ω \rightarrow $562 \times 10^1 \rightarrow 5621$ RN1/4PC $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ F

Mark	No.	Description	Part No.
LIST OF ASSEMBLIES			
NSP	PCB UNIT		TWX1007
⊙	—	TERMINAL UNIT	TWS1022
⊙	—	POWER AMP UNIT	TWH1011
⊙	—	CONTROL UNIT	TWG1005

TERMINAL UNIT

SEMICONDUCTOR

D1

RM10-LF-D2K

COIL

L1

TTF1008

CAPACITORS

C1-C4

CEA2R2M50NPLL

C5

TCH1149

RESISTORS

All resistors

RD1/4PS $\square\square\square$ JL

OTHERS

JK1, JK2 RCA JACK
CN1 CONNECTOR

TKS1052
TKS1049

POWER AMP UNIT

SEMICONDUCTORS

IC201

STK4067

Q201

2SA965

Q202

2SC2655

D201, D203

1SS176

D202

RD6R8JS

RELAY

RY201

TSR1004

CAPACITORS

C201

CEA010M50L2

C202, C203

CEA101M10L2

C204

CEA221M16L2

C213

CEA331M16L2

C205, C206

CQMA474K50

C207, C208

CEA471M16L2

C209, C210

CCCSL330J50

C211, C212

CCCSL680J50

C214

CEA102M16L2

RESISTORS

R203, R204

RS1V2R2JL

Other resistors

RD1/4PS $\square\square\square$ JL

Mark	No.	Description	Part No.
OTHERS			
	CN201	CONNECTOR	TKS1050
	CN202	CONNECTOR	TKS1018

CONTROL UNIT

SEMICONDUCTORS

IC101-IC105

NJM2068S

IC106

M5233L

Q101, Q103

2SC2458

Q102

2SA1048

Q104

2SC2060

D101, D103-D106, D108

1SS176

D102

RD5R6JS

D107

RD9R1JS

D109

BR4361F

SWITCH

SW101

CSG-207

COIL

L101

TTF1001

CAPACITORS

C108, C110

CQMA472J50

C105, C106

CQMA392J50

C107, C109

CQMA103J50

C114

CKCYB821K50

C101-C104, C111

CCCSL101J50

C118

CEA471M16L2

C113, C115

CEA220M50L2

C117, C119, C120

CEA101M10L2

C112

CEA010M50L2

C116

CEA101M16L2

RESISTORS

VR101, VR102

TSH1004

VR103

TSH1003

Other resistors

RD1/4PS $\square\square\square$ JL

OTHERS

CN101 CORD

TDC1726

CN102 CORD

TDC1727

SPACER

TNK1325